

US-PAT-NO: 6251280  
DOCUMENT-IDENTIFIER: US 6251280 B1

TITLE: Imprint-coating synthesis of selective  
functionalized ordered  
mesoporous sorbents for separation and sensors

DATE-ISSUED: June 26, 2001

US-CL-CURRENT: 210/656; 210/198.2 ; 210/502.1 ; 210/635 ;  
210/660 ; 210/681  
; 501/39 ; 502/400 ; 502/407 ; 502/408 ; 502/439

APPL-NO: 09/ 396067

DATE FILED: September 15, 1999

----- KWIC -----

Detailed Description Text - DETX:

Examples of ligands which may be employed in the present invention include, but are not limited to, organic silanes and Schiff bases. Examples of organic silanes useful in the present invention include compounds such as tris(methoxy)mercaptopropylsilane and (RO).sub.2 P(.dbd.O)CH.sub.2 CH.sub.2 Si(OR).sub.3, where R represents an alkyl group. R is preferably an alkyl group having from 1 to 5 carbon atoms. Preferred silanes useful in the present invention include 3-aminopropyltris(trimethylsiloxy)silane (APTS), N-(2-aminoethyl)-3-aminopropyltrimethoxysilane (AAPT), bis[3-(trimethoxysilyl)propyl]ethylenediamine (BAAPT), bis[3-(trimethoxysilyl)propyl]mono Schiff base (BSAPT1), bis[3-(trimethoxysilyl)propyl]di Schiff base (BSAPT2), bis[3-(trimethoxysilyl)propyl]-macroacyclic diSchiff base (BBSAPT), bis[3-(trimethoxysilyl)propyl]macroacyclic tetra Schiff base (BSSAPT),

bis[3-(trimethoxysilyl)propyl]-tetrasulfide (BTMSPTS),  
diethylphosphatoethyltrimethoxysilane (DEPETS),  
diethyl(trimethoxysilylpropyl)malonate (DETESPM),  
3-mercaptopropyl-trimethoxysilane (TMPT),  
N-trimethoxysilylpropyl-N,N,N-tri-n-butyl ammonium chloride  
(TSPBC),  
N-trimethoxysilylpropyl-3-guanidine chloride (TSPGC), and  
N-trimethoxysilylpropyl-N,N,N-trimethyl ammonium chloride  
(TSPMC), whose  
structures are provided in FIGS. 1A and 1B.

Current US Cross Reference Classification - CCXR:

210/198.2

US-PAT-NO: 5876595  
DOCUMENT-IDENTIFIER: US 5876595 A

TITLE: Adsorption medium and method of preparing same

DATE-ISSUED: March 2, 1999

US-CL-CURRENT: 210/198.2; 210/502.1 ; 210/635 ; 210/656 ;  
502/402

APPL-NO: 08/ 821892

DATE FILED: March 21, 1997

PARENT-CASE:

This is a division of application Ser. No. 08/585,369  
filed Jan. 11, 1996,  
now U.S. Pat. No. 5,667,674.

----- KWIC -----

Brief Summary Text - BSTX:

Preferred silanes feature three olefinic groups having the  
formula

--(CH.sub.2).sub.m CH.dbd.CH.sub.2, where m is between 0  
and 3, inclusive.

Particularly preferred are olefinic groups having the  
formula --CH.sub.2

CH.dbd.CH.sub.2 (m=1) and --CH.dbd.CH.sub.2 (m=0).

Examples of preferred

ligands include hydrogen, a halogen (e.g., F, Cl, Br, or  
I), an alkoxy group

(e.g., having between 1 and 3 carbon atoms, inclusive, such  
as a methoxy or

ethoxy group), an aryl group (e.g., a phenyl or naphthyl  
group), a derivatized

aryl group (e.g., an aminoaryl, haloaryl, hydroxyaryl,  
mercaptoaryl, cyanoaryl,

phosphonoaryl, or carboxyaryl group having between 1 and 18  
carbon atoms,

inclusive), an alkyl group (e.g., having between 1 and 22

carbon atoms, inclusive, such as an octyl or octadecyl group), or a derivatized alkyl group (e.g., an aminoalkyl, haloalkyl, hydroxyalkyl, mercaptoalkyl, cyanoalkyl, phosphonoalkyl, or carboxyalkyl group having between 1 and 18 carbon atoms, inclusive). Other examples of derivatized alkyl and aryl groups include alkyl or aryl-bound cyclodextrans, crown ethers, and chiral molecules. Specific examples of preferred silanes include triallyloctadecylsilane, trivinylloctadecylsilane, triallyloctylsilane, and trivinylloctylsilane.

Current US Original Classification - CCOR:

210/198.2

US-PAT-NO: 5667674

DOCUMENT-IDENTIFIER: US 5667674 A

TITLE: Adsorption medium and method of preparing same

DATE-ISSUED: September 16, 1997

US-CL-CURRENT: 210/198.2; 210/502.1 ; 210/635 ; 210/656 ;  
502/402

APPL-NO: 08/ 585369

DATE FILED: January 11, 1996

----- KWIC -----

Brief Summary Text - BSTX:

Preferred silanes feature three olefinic groups having the formula

--(CH.sub.2).sub.m CH.dbd.CH.sub.2, where m is between 0 and 3, inclusive.

Particularly preferred are olefinic groups having the formula --CH.sub.2

CH.dbd.CH.sub.2 (m.dbd.1) and --CH.dbd.CH.sub.2 (m.dbd.0).

Examples of

preferred ligands include hydrogen, a halogen (e.g., F, Cl, Br, or I), an

alkoxy group (e.g., having between 1 and 3 carbon atoms, inclusive, such as a

methoxy or ethoxy group), an aryl group (e.g., a phenyl or naphthyl group), a

derivatized aryl group (e.g., an aminoaryl, haloaryl, hydroxyaryl,

mercaptoaryl, cyanoaryl, phosphonoaryl, or carboxyaryl group having between 1

and 18 carbon atoms, inclusive), an alkyl group (e.g., having between 1 and 22

carbon atoms, inclusive, such as an octyl or octadecyl group), or a derivatized

alkyl group (e.g., an aminoalkyl, haloalkyl, hydroxyalkyl, mercaptoalkyl,

cyanoalkyl, phosphonoalkyl, or carboxyalkyl group having

between 1 and 18 carbon atoms, inclusive). Other examples of derivatized alkyl and aryl groups include alkyl or aryl-bound cyclodextrans, crown ethers, and chiral molecules. Specific examples of preferred silanes include triallyloctadecylsilane, trivinyloctadecylsilane, triallyloctylsilane, and trivinyloctylsilane.

Current US Original Classification - CCOR:

210/198.2

	Type	L #	Hits	Search Text	DBs	Time Stamp
1	BRS	L1	883	methoxy same ligand	USPAT	2003/03/13 10:32
2	BRS	L2	1688	210/198.2.ccls.	USPAT	2003/03/13 10:32
3	BRS	L3	3	1 and 2	USPAT	2003/03/13 10:32

	Comments	Error Definition	Errors
1			0
2			0
3			0



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3	3	(methoxy same ligand) and 210/198.2.ccls.	USPAT	2003/03/13 10:32
-	0	therkorn/xp	USPAT	2003/03/12 10:48
-	1633	therkorn.xp.	USPAT	2003/03/12 10:48
-	809	therkorn.xp. and 210/198.2.ccls.	USPAT	2003/03/12 10:48
-	54690	diol	USPAT	2003/03/12 10:49
-	41	(therkorn.xp. and 210/198.2.ccls.) and diol	USPAT	2003/03/12 11:07
-	140	methoxy near7 ligand	USPAT	2003/03/12 11:08
-	0	210/198.2.ccls. and (methoxy near7 ligand)	USPAT	2003/03/12 11:08
-	883	methoxy same ligand	USPAT	2003/03/12 11:09
-	0	210/198.2.ccls. and (methoxy near7 ligand)	USPAT	2003/03/12 11:09
-	13	methoxyl same ligand	USPAT	2003/03/12 11:12
-	2547	methoxyl	USPAT	2003/03/12 11:13
-	0	210/198.2.ccls. and methoxyl	USPAT	2003/03/12 11:13
-	102535	methoxy	USPAT	2003/03/12 11:13
-	66	210/198.2.ccls. and methoxy	USPAT	2003/03/12 11:29
-	2223	alkoxy same ligand	USPAT	2003/03/12 11:31
-	14	210/198.2.ccls. and (alkoxy same ligand)	USPAT	2003/03/12 11:31
-	491	(ethylene adj glycol) same ligand	USPAT	2003/03/12 11:39
-	6	210/198.2.ccls. and ((ethylene adj glycol) same ligand)	USPAT	2003/03/12 11:39
-	1688	210/198.2.ccls.	USPAT	2003/03/12 11:44
-	416114	magnet\$6	USPAT	2003/03/12 15:40
-	1688	210/198.2.ccls.	USPAT	2003/03/12 15:40
-	185	magnet\$6 and 210/198.2.ccls.	USPAT	2003/03/12 15:41
-	3179	magnet\$6 near bead	USPAT	2003/03/12 15:42
-	11	210/198.2.ccls. and (magnet\$6 near bead)	USPAT	2003/03/12 15:42

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